

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Environmental Operations Plant (EOP)
Plaquemine, Iberville/West Baton Rouge Parish, Louisiana
Agency Interest Number: 1409
Activity Number: PER20090004
Proposed Permit Number: 2190-V1**

I. APPLICANT

Company:

The Dow Chemical Co - Louisiana Operations
PO Box 150
Plaquemine, Louisiana 70765-0150

Facility:

Environmental Operations Plant
21255 Highway 1
Plaquemine, Iberville Parish, Louisiana 70764
Approximate UTM coordinates are 669.3 kilometers East and 3,356.3 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

The Dow Chemical Company, Louisiana Operations (Dow), operates the Environmental Operations Plant (EOP) under Louisiana Air Permit No. 2190-V0 issued on May 31, 2006.

Dow Chemical Co - Louisiana Operations is a designated Part 70 source. Several Part 70 permits have been issued to the operating units within the Dow Chemical Plaquemine facilities. These include:

Permit No.	Unit or Source	Date Issued
2007-V2	Glycol I Plant	12/13/2006
2008-V5	Polyethylene A Plant	03/06/2009
2024-V3	Light Hydrocarbons III Plant	09/13/2006
2025-V3	Vector SBC Plant	04/15/2009
2048-V2	Polyethylene C Plant	11/19/2008
2179-V6	Polyethylene B Plant	02/22/2008
2188-V1	Solvents/EDC I Plant	6/24/2009
2200-V1	Chlorinated Polyethylene Plant	12/01/2004

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2227-V5	Cellulose Plant	02/08/2008
2267-V2	Energy System Plant	08/10/2009
2285-V3	Vinyl II Plant THROX Boilers	01/25/2007
2573-V5	Chlorine Cell Service Plants	4/9/2009
2665-V7	Vinyl II Plant	06/25/2007
2037-V1	Chlorinated Methanes Plant (CMP)	05/29/2007
2203-V1	Glycol II Plant	06/20/2005
2255-V1	Light Hydrocarbons II Plant	04/30/2007
2235-V0	Railroad Tank Car Cleaning Facility	01/18/2006
2190-V0	Environmental Operations Plant	05/31/2006

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on February 12, 2009 requesting a Part 70 operating permit modification for the Environmental Operations Plant.

Project

In this modification, Dow requested the following:

- Delete EQT452, EQT475, EQT476, FUG012 and GRP071;
- Include Insignificant Activity for a belt press tank, issued on 1/2/2008;
- List EQT838 for Tank T-3B Storage Tank instead of EQT495;
- Reconcile source emissions.

Proposed Permit

Permit 2190-V1 will be the modification of Part 70 Operating Permit 2190-V0 for the Environmental Operations Plant within the Dow Chemical Co - Louisiana Operations.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

<u>Pollutants</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
CO	46.30	18.30	-28.00
NO _x	113.00	78.10	-34.90
PM ₁₀	39.10	35.41	-3.69
SO ₂	24.50	0.80	-23.70
VOC	54.40	72.63	+18.23

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

Applicability and exemptions of selected subject items are listed as Table 1 and 2 at the proposed Part 70 Operating Permit.

Prevention of Significant Deterioration/Nonattainment Review

There is no project associated with this permit modification. Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) are not required.

Streamlined Equipment Leak Monitoring Program

The permit does not include any streamlined requirements.

MACT Requirements

The facility is subject to Louisiana MACT requirements. Detailed requirements are listed in the Specific requirements Section of the draft permit.

Air Quality Analysis

Emissions associated with the proposed modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

Dispersion Model(s) Used: <None>

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General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

No permit shield is requested.

VI. PERIODIC MONITORING

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the proposed permit.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

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Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.